

# QUAIL VALLEY SEWER IMPROVEMENT PROJECT

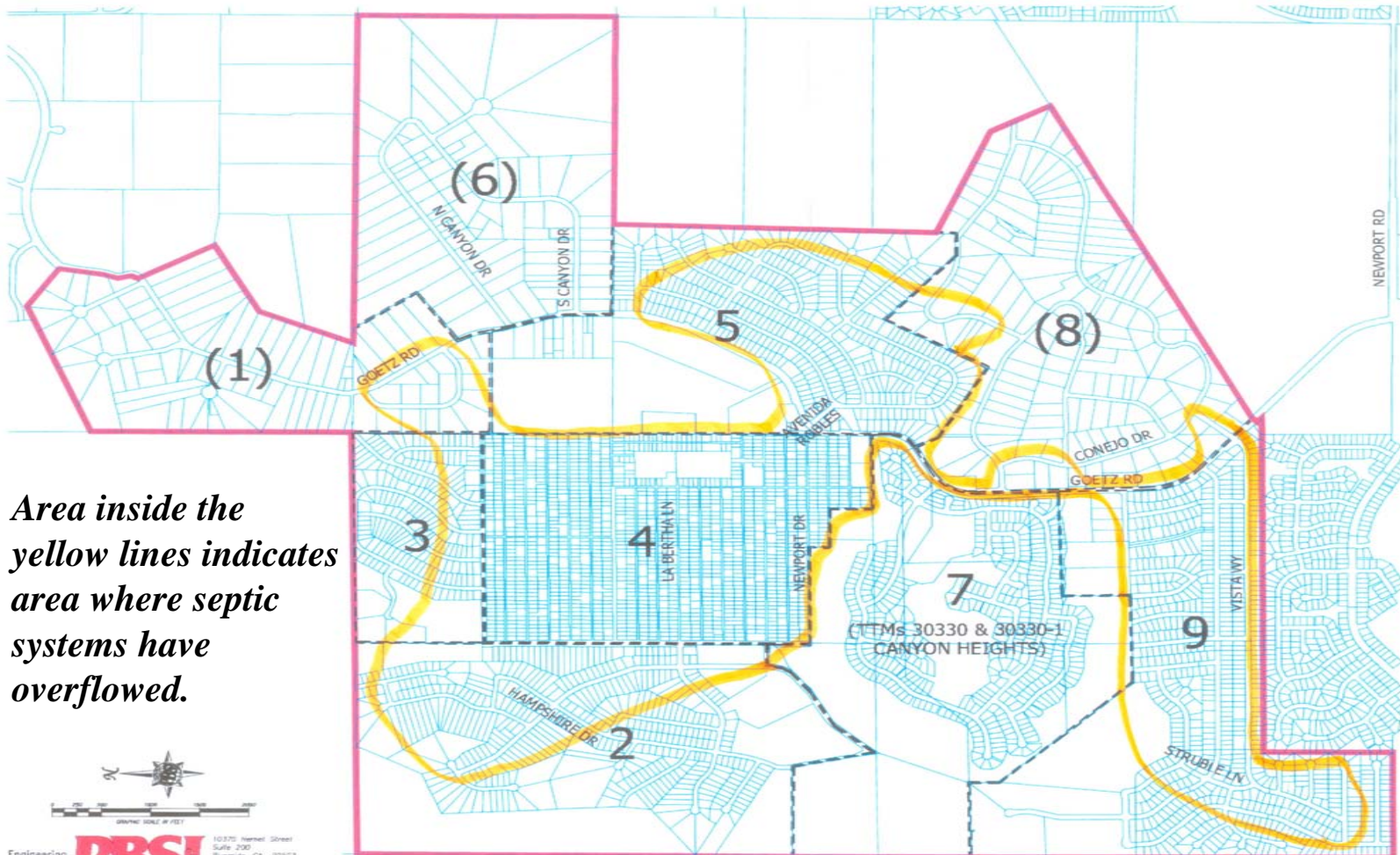


***Note: The study is available on the District's website at  
[www.emwd.org](http://www.emwd.org)***

# Quail Valley Sewer Improvement Alternatives Study

- EMWD hired PBS&J to evaluate sewer improvement alternatives in Quail Valley due to failing septic systems
- Site Conditions are Challenging:
  - Shallow Groundwater
  - Bedrock/Soil Type
  - Hilly Topography
  - High Density Areas

# Septic Tank Overflows Map



*Area inside the yellow lines indicates area where septic systems have overflowed.*

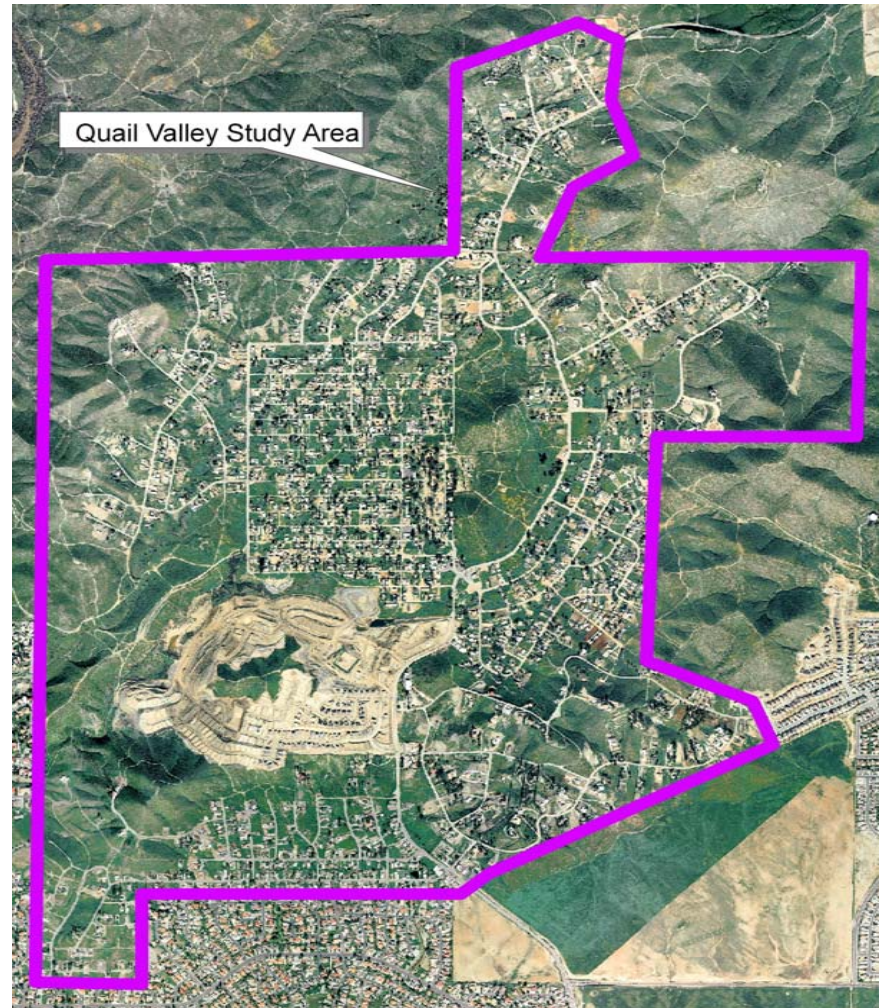
# Quail Valley Improvement Alternative Study

- The study evaluated the alternatives based on:
  - Total ultimate dwelling units
  - Sewer layout and feasibility
  - Geotechnical Study
  - Off-site Sewer Improvements
  - Technologies: Gravity, Vacuum, Low Pressure, Combination, STEP Systems
  - Construction Costs and Life Cycle Costs
- Conventional Gravity System is preferred



# Site Information: Dwelling Units

- 1,390 Existing dwelling units
- 3,420 Total future dwelling units (excluding Canyon Heights Tract)



# Site Information: Topography

- The hilly topography presents a great challenge to sewer construction



- Shallow bedrock



# Site Information: Geotechnical

- Geotechnical Study Conclusion:

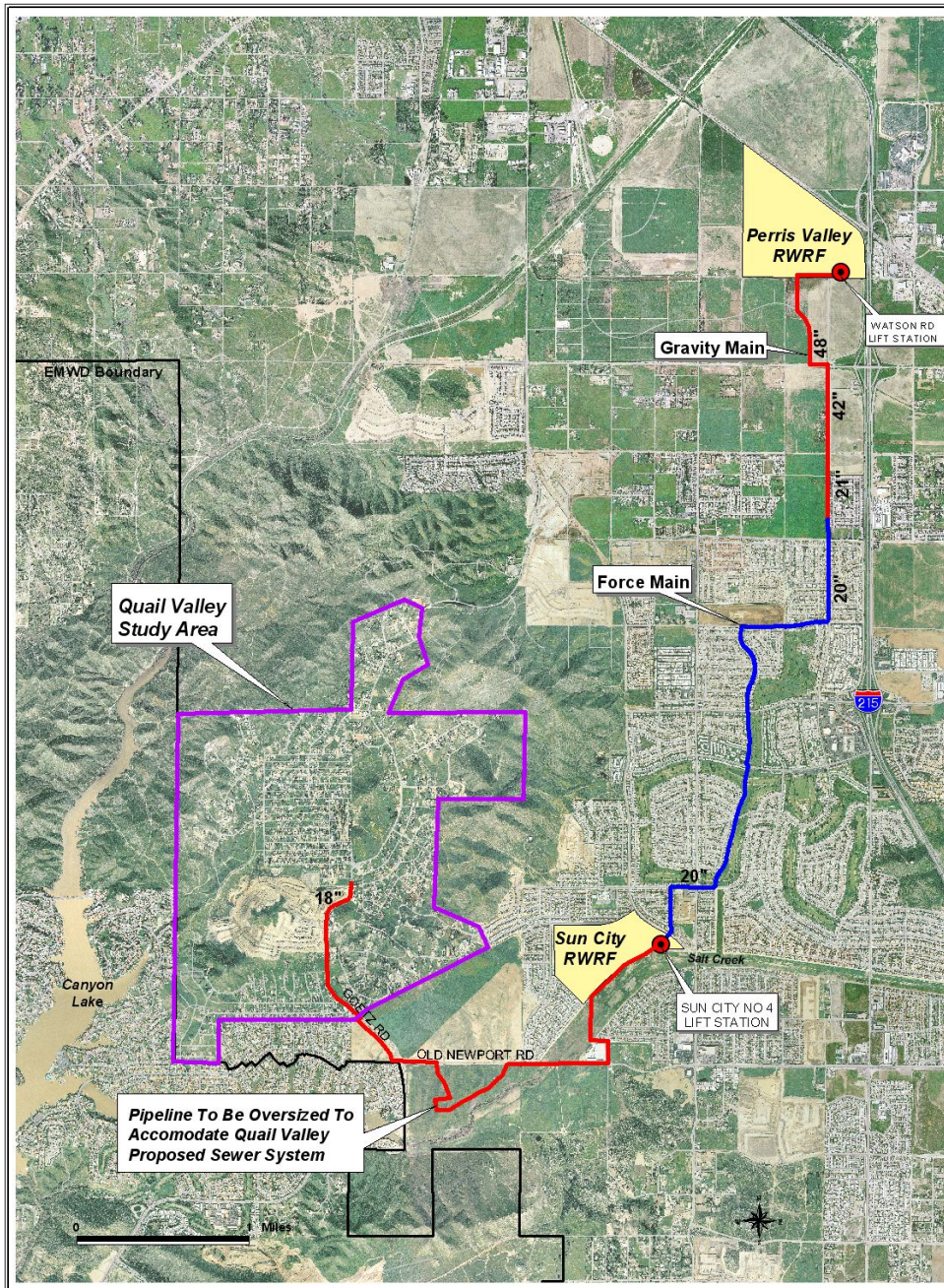
“The primary issues... are related to shallow bedrock and groundwater. Bedrock may be difficult to excavate using large conventional excavators below a depth of five to ten feet.”



# Off-Site Sewer

EMWD is installing an off-site sewer main from the Quail Valley area that ties into the Perris Valley Regional Water Reclamation Facility.

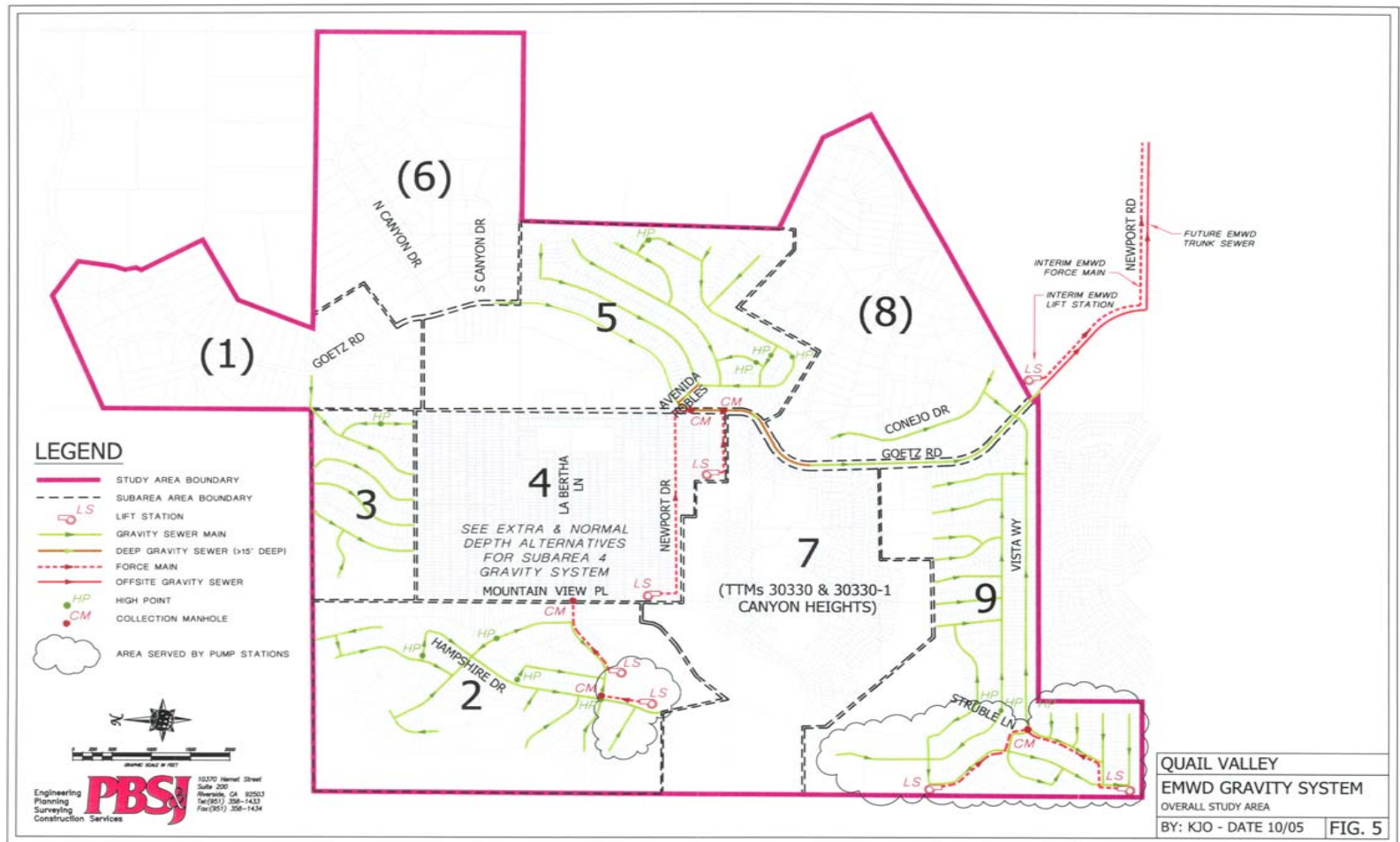
This main has been sized to support the Quail Valley area currently on septic systems.



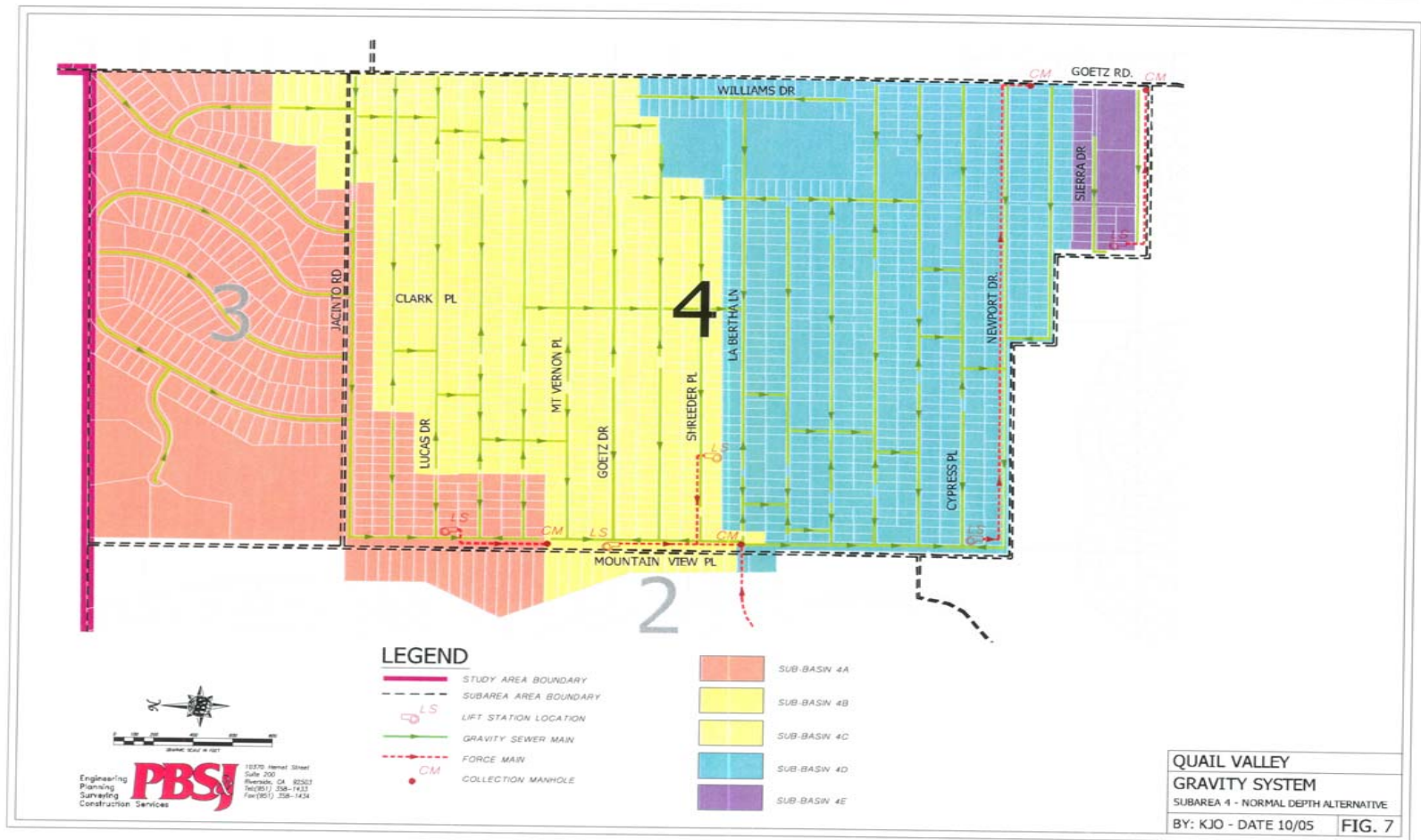


# Conventional Gravity Sewer Layout

(Preferred Alternative)



# Gravity Sewer Layout for Subarea 4



# Conventional Gravity Sewer Costs

- **Capital Cost:** Initial cost to construct is \$60 M
  - ✓ Includes: Administration, Easements/Property Acquisition, Design, Construction, Inspection, Survey, & Compaction Testing

## Connection Fee

- \$4,185 per Equivalent Dwelling Unit
- Covers past and ongoing construction projects including:
  - Construction of the Perris Valley Regional Water Reclamation Facility (PVRWRF) Tertiary Expansion
  - Construction of the Sun City Lift Station, Force Main and Interceptor sewer.
- Additional \$300 fee for new homes for Recycled Water System construction



# Funding Sources

- Low Interest Loans
- Grants
- Supplemental Environmental Project (SEP)
- Assessment District

# Funding Status

- EMWD applied for Proposition 50 Funds through the State Water Resources Control Board for the environmental documentation and design
  - Application was denied
  - EMWD will continue to pursue other grant funding
- Criteria for an Assessment District includes:
  - Majority vote of acceptance from the Community
  - Assessment lien cannot exceed 25% of assessed property value
  - Repayment obligation added to property tax bill.

# Monthly Payment per House

	Sewer Rate	Assessment District Estimated Value
Monthly Payment	\$23	\$175 - \$225



# Project Schedule

Project Phase	Duration (months)		
Pursue Grant Funding	?		
Form Assessment District (Occurs Concurrently)	12	-	18
Design & Acquire Easements	12	-	16
Advertise, Bid, & Award	2	-	4
Construction	24	-	30
<b>TOTAL (months)</b>	<b>38</b>	<b>-</b>	<b>50</b>
<b>TOTAL (years)</b>	<b>3</b>	<b>-</b>	<b>4</b>

# Questions?

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